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7

Parameter List

This chapter contains a full listing of all parameters and settings available in the drive

7.1 PARAMETER TABLE. 122

7.1 Parameter Table

No.	Name	Description
A1: Initialization Parameters Use A1 parameters to configure the basic environment for drive operation.		
A1-01	Access Level Selection	0: Operation only 1: User Parameters (access to parameters selected by the user) 2: Advanced Access Level
A1-02	Control Method Selection	0: V/f Control without PG 2: Open Loop Vector (OLV) 5: PM Open Loop Vector (PM) Note: Does not return to the default setting after initialization.
A1-03	Initialize Parameters	0: No Initialize 1110: User Initialize (First set user parameter values must be stored using parameter o2-03) 2220: 2-Wire Initialization 3330: 3-Wire Initialization 5550: OPE04 Error Reset
A1-04	Password 1	Refer to V1000 Technical Manual for details.
A1-05	Password 2	Refer to V1000 Technical Manual for details.
A1-06	Application Preset	Refer to V1000 Technical Manual for details.
A1-07	DriveWorksEZ Function Selection	Refer to V1000 Technical Manual for details.
A2: User Parameters Use A2 parameters to program the drive.		
A2-01 to A2-32	User Parameters, 1 to 32	Refer to V1000 Technical Manual for details.
A2-33	User Parameter Automatic Selection	Refer to V1000 Technical Manual for details.
b1: Operation Mode Selection Use b1 parameters to configure the operation mode.		
b1-01	Frequency Reference Selection 1	0: Operator - Digital preset speed d1-01 to d1-17. 1: Terminals - Analog input terminal A1 or A2. 2: Memobus communications 3: Option PCB 4: Pulse Input (Terminal RP)
b1-02	Run Command Selection 1	0: Operator - RUN and STOP keys on the digital operator. 1: Digital input terminals S1 to S7 2: Memobus communications 3: Option PCB.
b1-03	Stopping Method Selection	0: Ramp to Stop 1: Coast to Stop 2: DC Injection Braking to Stop 3: Coast with Timer (A new run command is ignored if received before the timer expires)
b1-04	Reverse Operation Selection	0: Reverse enabled. 1: Reverse disabled.
b1-07	Local/Remote Run Selection	Refer to V1000 Technical Manual for details.
b1-08	Run Command Selection while in Programming Mode	0: Run command accepted only in the operation menu. 1: Run command accepted in all menus. 2: Prohibit entering programming mode during Run

No.	Name	Description
b1-14	Phase Order Selection	Sets phase order for drive output terminals U/T1, V/T2 and W/T3. 0: Standard 1: Switch phase order
b1-15	Frequency Reference 2	Refer to V1000 Technical Manual for details.
b1-16	Run Command Source 2	Refer to V1000 Technical Manual for details.
b1-17	Run Command at Power Up	Refer to V1000 Technical Manual for details.
b2: DC Injection Braking Use b2 parameters to configure DC Injection Braking operation		
b2-01	DC Injection Braking Start Frequency	Refer to V1000 Technical Manual for details.
b2-02	DC Injection Braking Current	Sets the DC Injection Braking current as a percentage of the drive rated current.
b2-03	DC Injection Braking Time/DC Excitation Time at Start	Sets DC Injection Braking time at start. Disabled when set to 0.00 seconds.
b2-04	DC Injection Braking Time at Stop	Sets DC Injection Braking time at stop.
b2-08	Magnetic Flux Compensation Value	Refer to V1000 Technical Manual for details.
b2-12	Short Circuit Brake Time at Start	Refer to V1000 Technical Manual for details.
b2-13	Short Circuit Brake Time at Stop	Refer to V1000 Technical Manual for details.
b3: Speed Search Use B3 parameters to configure Speed Search function operation.		
b3-01	Speed Search Selection	Refer to V1000 Technical Manual for details.
b3-02	Speed Search Deactivation Current	Sets the current level at which the speed is assumed to be detected and Speed Search is ended. Set in percent of the drive rated current.
b3-03	Speed Search Deceleration Time	Sets time constant used to reduce the output frequency during speed search. Related to a change from max. output frequency to 0.
b3-05	Speed Search Delay Time	Refer to V1000 Technical Manual for details.
b3-06	Output Current 1 during Speed Search	Refer to V1000 Technical Manual for details.
b3-10	Speed Search Detection Compensation Gain	Refer to V1000 Technical Manual for details.
b3-14	Bi-Directional Speed Search Selection	Refer to V1000 Technical Manual for details.
b3-17	Speed Search Restart Current Level	Refer to V1000 Technical Manual for details.
b3-18	Speed Search Restart Detection Time	Refer to V1000 Technical Manual for details.
b3-19	Number of Speed Search Restarts	Refer to V1000 Technical Manual for details.
b3-24	Speed Search Method Selection	Refer to V1000 Technical Manual for details.
b3-25	Speed Search Retry Interval Time	Refer to V1000 Technical Manual for details.
b4: Timer Function Use b4 parameters to configure timer function operation.		
b4-01	Timer Function On-Delay Time	Refer to V1000 Technical Manual for details.
b4-02	Timer Function Off-Delay Time	Refer to V1000 Technical Manual for details.
b5: PID Control Use b5 parameters to configure the PID control drive function.		
b5-01	PID Function Setting	0: Disabled 1: Enable (Deviation is D-controlled) 2: Enable (Feedback is D-controlled) 3: Enable (Deviation is D-controlled, PID output added to Freq. Ref.) 4: Enable (Feedback is D-controlled, PID output added to Freq. Ref.)
b5-02	Proportional Gain Setting (P)	Sets the proportional gain of the PID controller. A setting of 0.00 disables P control.

No.	Name	Description
b5-03	Integral Time Setting (I)	Sets the integral time for the PID controller. A setting of 0.0 s disables integral control.
b5-04	Integral Limit Setting	Sets the maximum output possible from the integrator.
b5-05	Derivative Time (D)	Sets D control derivative time. A setting of 0.00 s disables derivative control.
b5-06	PID Output Limit	Refer to V1000 Technical Manual for details.
b5-07	PID Offset Adjustment	Applies an offset to the PID controller output.
b5-08	PID Primary Delay Time Constant	Sets the amount of time for the filter on the output of the PID controller.
b5-09	PID Output Level Selection	Refer to V1000 Technical Manual for details.
b5-10	PID Output Gain Setting	Sets the gain applied to the PID output.
b5-11	PID Output Reverse Selection	Refer to V1000 Technical Manual for details.
b5-12	PID Feedback Reference Missing Detection Selection	0: Disabled. 1: Feedback loss detected when PID enabled. Alarm output, operation is continued without triggering a fault contact. 2: Feedback loss detected when PID enabled. Fault output, operation is stopped and a fault contact is triggered. 3: Feedback loss detection when PID disabled by digital input. No alarm/fault output. “PID feedback loss” digital output is switched. 4: PID Feedback error detection when PID disabled by digital input. An alarm is triggered and the drive continues to run. 5: PID Feedback error detection when PID disabled by digital input. Fault is triggered and output is shut off.
b5-13	PID Feedback Loss Detection Level	Sets the PID feedback loss detection level.
b5-14	PID Feedback Loss Detection Time	Sets the PID feedback loss detection delay time.
b5-15	PID Sleep Function Start Level	Refer to V1000 Technical Manual for details.
b5-16	PID Sleep Delay Time	Refer to V1000 Technical Manual for details.
b5-17	PID Accel/Decel Time	Refer to V1000 Technical Manual for details.
b5-18	PID Setpoint Selection	Refer to V1000 Technical Manual for details.
b5-19	PID Setpoint Value	Refer to V1000 Technical Manual for details.
b5-20	PID Setpoint Scaling	Refer to V1000 Technical Manual for details.
b5-34	PID Output Lower Limit	Refer to V1000 Technical Manual for details.
b5-35	PID Input Limit	Refer to V1000 Technical Manual for details.
b5-36	PID Feedback High Detection Level	Refer to V1000 Technical Manual for details.
b5-37	PID Feedback High Level Detection Time	Refer to V1000 Technical Manual for details.
b5-38	PID Setpoint / User Display	Refer to V1000 Technical Manual for details.
b5-39	PID Setpoint Display Digits	Refer to V1000 Technical Manual for details.
b6: Dwell Function Use b6 parameters to configure dwell function operation.		
b6-01	Dwell Reference at Start	Refer to V1000 Technical Manual for details.
b6-02	Dwell Time at Start	
b6-03	Dwell Frequency at Stop	
b6-04	Dwell Time at Stop	
b8: Energy Saving Use b8 parameters to configure the energy saving/conservation drive function.		
b8-01	Energy Saving Control Selection	0: Disabled 1: Enabled (set b8-04)
b8-02	Energy Saving Gain	Refer to V1000 Technical Manual for details.

No.	Name	Description
b8-03	Energy Saving Control Filter Time Constant	Refer to V1000 Technical Manual for details.
b8-04	Energy Saving Coefficient Value	Sets the Energy Saving coefficient and is used to fine adjustments in V/f Control.
b8-05	Power Detection Filter Time	Sets a filter time for the Power Detection used by Energy Savings in V/f Control.
b8-06	Search Operation Voltage Limit	Sets the limit for the voltage search operation performed by Energy Savings in V/f Control.
C1: Acceleration and Deceleration Times Use C1 parameters to configure motor acceleration and deceleration.		
C1-01	Acceleration Time 1	Sets the time to accelerate from 0 to maximum frequency.
C1-02	Deceleration Time 1	Sets the time to decelerate from maximum frequency to 0.
C1-03	Acceleration Time 2	Sets the time to accelerate from 0 to maximum frequency when Accel/Decel times 2 are selected by a digital input.
C1-04	Deceleration Time 2	Sets the time to decelerate from maximum frequency to 0 when Accel/Decel times 2 are selected by a digital input.
C1-05	Acceleration Time 3 (Motor 2 Accel Time 1)	Sets the time to accelerate from 0 to maximum frequency when Accel/Decel times 3 are selected by a digital input.
C1-06	Deceleration Time 3 (Motor 2 Decel Time 1)	Sets the time to decelerate from maximum frequency to 0 when Accel/Decel times 3 are selected by a digital input.
C1-07	Acceleration Time 4 (Motor 2 Accel Time 2)	Sets the time to accelerate from 0 to maximum frequency when Accel/Decel times 4 are selected by a digital input.
C1-08	Deceleration Time 4 (Motor 2 Decel Time 2)	Sets the time to decelerate from maximum frequency to 0 when Accel/Decel times 4 are selected by a digital input.
C1-09	Fast-Stop Time	Refer to V1000 Technical Manual for details.
C1-10	Accel/Decel Time Setting Units	0: 0.01 s (0.00 to 600.00 s) 1: 0.1 s (0.0 to 6000.0 s)
C1-11	Accel/Decel Time Switching Frequency	Refer to V1000 Technical Manual for details.
C2: S-Curve Characteristics Use C2 parameters to configure S-curve operation.		
C2-01	S-Curve Characteristic at Accel Start	S-curve is used to further soften the starting and stopping ramp. The longer the S-curve time, the softer the starting and stopping ramp.
C2-02	S-Curve Characteristic at Accel End	
C2-03	S-Curve Characteristic at Decel Start	
C2-04	S-Curve Characteristic at Decel End	
C3: Slip Compensation Use C3 parameters to configure the slip compensation function.		
C3-01	Slip Compensation Gain	Sets the slip compensation gain.
C3-02	Slip Compensation Primary Delay Time	Adjusts the slip compensation function delay time.
C3-03	Slip Compensation Limit	Refer to V1000 Technical Manual for details.
C3-04	Slip Compensation Selection during Regeneration	0: Disabled 1: Enabled
C3-05	Output Voltage Limit Operation Selection	Refer to V1000 Technical Manual for details.

No.	Name	Description
C4: Torque Compensation Use C4 parameters to configure Torque Compensation function.		
C4-01	Torque Compensation Gain	V/f control: Sets the gain for the automatic torque (voltage) boost function and helps to produce better starting torque. Open Loop Vector: Sets the torque compensation function gain. Normally no change is required.
C4-02	Torque Compensation Primary Delay Time	Sets the torque compensation filter time.
C4-03	Torque Compensation at Forward Start	Refer to V1000 Technical Manual for details.
C4-04	Torque Compensation at Reverse Start	Refer to V1000 Technical Manual for details.
C4-05	Torque Compensation Time Constant	Refer to V1000 Technical Manual for details.
C4-06	Torque Compensation Primary Delay Time 2	Refer to V1000 Technical Manual for details.
C5: Speed Control (ASR) Use C5 parameters to configure the Automatic Speed Regulator (ASR). C5 parameters are available only when using V/f with Simple PG (H6-01 = 3).		
C5-01	ASR Proportional Gain 1	Refer to V1000 Technical Manual for details.
C5-02	ASR Integral Time 1	Refer to V1000 Technical Manual for details.
C5-03	ASR Proportional Gain 2	Refer to V1000 Technical Manual for details.
C5-04	ASR Integral Time 2	Refer to V1000 Technical Manual for details.
C5-05	ASR Limit	Refer to V1000 Technical Manual for details.
C6: Carrier Frequency Use C6 parameters to configure the carrier frequency drive settings.		
C6-01	Normal/Heavy Duty Selection	Refer to V1000 Technical Manual for details.
C6-02	Carrier Frequency Selection	1: 2.0 kHz 2: 5.0 kHz 3: 8.0 kHz 4: 10.0 kHz 5: 12.5 kHz 6: 15.0 kHz 7: Swing PWM1 (Audible sound 1) 8: Swing PWM2 (Audible sound 2) 9: Swing PWM3 (Audible sound 3) A: Swing PWM4 (Audible sound 4) B to E: No setting possible F: User defined (determined by C6-03 through C6-05)
C6-03	Carrier Frequency Upper Limit	Refer to V1000 Technical Manual for details.
C6-04	Carrier Frequency Lower Limit	
C6-05	Carrier Frequency Proportional Gain	Refer to V1000 Technical Manual for details.
d1: Frequency Reference Use d1 parameters to configure the drive frequency reference.		
d1-01	Frequency Reference 1	Frequency reference
d1-02	Frequency Reference 2	Frequency reference when digital input “Multi-Step Speed Reference 1” (H1-☐☐ = 3) is on.
d1-03	Frequency Reference 3	Frequency reference when digital input “Multi-Step Speed Reference 2” (H1-☐☐ = 4) is on.
d1-04	Frequency Reference 4	Frequency reference when digital inputs “Multi-Step Speed Reference 1, 2” (H1-☐☐ = 3 and 4) are on.

No.	Name	Description
d1-05	Frequency Reference 5	Frequency reference when digital input “Multi-Step Speed Reference 3” (H1-□□ = 5) is on.
d1-06	Frequency Reference 6	Frequency reference when digital inputs “Multi-Step Speed Reference 1, 3” (H1-□□ = 3 and 5) are on.
d1-07	Frequency Reference 7	Frequency reference when digital inputs “Multi-Step Speed Reference 2, 3” (H1-□□ = 4 and 5) are on.
d1-08	Frequency Reference 8	Frequency reference when multi-function input “Multi-Step speed reference 1, 2, 3” (H1-□□ = 3, 4, 5) are on.
d1-09	Frequency Reference 9	Frequency reference when multi-function input “Multi-Step Speed Reference 4” (H1-□□ = 32) is on.
d1-10	Frequency Reference 10	Frequency reference when digital input “Multi-Step Speed Reference 1, 4” (H1-□□ = 3 and 32) are on.
d1-11	Frequency Reference 11	Frequency reference when digital inputs “Multi-Step Speed Reference 2, 4” (H1-□□ = 4 and 32) are on.
d1-12	Frequency Reference 12	Frequency reference when digital inputs “Multi-Step Speed Reference 1, 2, 4” (H1-□□ = 3, 4, 32) are on.
d1-13	Frequency Reference 13	Frequency reference when digital inputs “Multi-Step Speed Reference 3, 4” (H1-□□ = 5 and 32) are on.
d1-14	Frequency Reference 14	Frequency reference when digital inputs “Multi-Step Speed Reference 1, 3, 4” (H1-□□ = 3, 5, 32) are on.
d1-15	Frequency Reference 15	Frequency reference when digital inputs “Multi-Step Speed Reference 2, 3, 4” (H1-□□ = 4, 5, 32) are on.
d1-16	Frequency Reference 16	Frequency reference when digital inputs “Multi-Step Speed Reference 1, 2, 3, 4” (H1-□□ = 3, 4, 5, 32) are on.
d1-17	Jog Frequency Reference	Frequency reference when digital inputs “Jog Frequency Reference,” “Forward Jog” or “Reverse Jog.” are on.
d2: Frequency Upper and Lower Limits Use d2 parameters to configure the frequency reference limits.		
d2-01	Frequency Reference Upper Limit	Sets the frequency reference upper limit as a percentage of maximum output frequency (E1-04).
d2-02	Frequency Reference Lower Limit	Sets the frequency reference lower limit as a percentage of maximum output frequency (E1-04).
d2-03	Master Speed Reference Lower Limit	Refer to V1000 Technical Manual for details.
d3: Jump Frequency Use d3 parameters to configure the drive Jump Frequency settings.		
d3-01	Jump Frequency 1	d3-01 to d3-04 allow programming of three prohibited frequency reference points for eliminating problems with resonant vibration of the motor / machine.
d3-02	Jump Frequency 2	
d3-03	Jump Frequency 3	
d3-04	Jump Frequency Width	This parameter sets the dead-band width around each selected prohibited frequency reference point.
d4: Frequency Reference Hold Use d4 parameters to configure the drive frequency reference hold function.		
d4-01	Frequency Reference Hold Function Selection	0: Disabled 1: Enabled
d4-03	Frequency Reference Bias Step (Up/Down 2)	Sets the bias added to the frequency reference when the Up/Down 2 digital inputs are set.
d4-04	Frequency Reference Accel/Decel (Up/Down 2)	0: Adjusts bias value according to currently selected accel/decel time. 1: Adjusts the bias value by Accel/Decel Time 4 (C1-07 and C1-08).

No.	Name	Description
d4-05	Frequency Reference Bias Operation Mode Selection (Up/Down 2)	0: Holds the bias value when Up/Down 2 reference is on or off. 1: When the Up 2 reference and Down 2 reference are both on or both off, applied bias becomes 0 using currently selected accel/ decel. times.
d4-06	Frequency Reference Bias (Up/Down 2)	Saves the bias value once the frequency reference is adjusted.
d4-07	Analog Frequency Reference Fluctuation Limit (Up/Down 2)	When the Up 2 and Down 2 commands are enabled, the frequency reference holds the bias value as the levels for the analog frequency reference or pulse train frequency reference change, accelerating or decelerating to the frequency reference.
d4-08	Frequency Reference Bias Upper Limit (Up/Down 2)	When d4-06 is greater than d4-08, d4-08 becomes bias for upper limit.
d4-09	Frequency Reference Bias Lower Limit (Up/Down 2)	When d4-06 is less than d4-09, d4-09 becomes bias for lower limit.
d4-10	Up/Down Frequency Reference Limit Selection	0: Lower Limit is determined by d2-02 or analog input. 1: Lower Limit is determined by d2-02.
d7: Offset Frequency Use d7 parameters to set the offset frequency.		
d7-01	Offset Frequency 1	Refer to V1000 Technical Manual for details.
d7-02	Offset Frequency 2	Refer to V1000 Technical Manual for details.
d7-03	Offset Frequency 3	Refer to V1000 Technical Manual for details.
E1: V/f Pattern Characteristics Use E1 parameters to set V/f characteristics for the motor.		
E1-01	Input Voltage Setting	Refer to V1000 Technical Manual for details.
E1-03	V/f Pattern Selection	Refer to V1000 Technical Manual for details.
E1-04	Max Output Frequency	Only applicable when E1-03 is set to F.
E1-05	Max Voltage	Only applicable when E1-03 is set to F.
E1-06	Base Frequency	Only applicable when E1-03 is set to F.
E1-07	Mid Output Freq.	Only applicable when E1-03 is set to F. To set linear V/f characteristics, set the same values for E1-07 and E1-09.
E1-08	Mid Output Frequency Voltage	Only applicable when E1-03 is set to F.
E1-09	Minimum Output Freq.	Only applicable when E1-03 is set to F. To set linear V/f characteristics, set the same values for E1-07 and E1-09.
E1-10	Minimum Output Freq. Volt.	Only applicable when E1-03 is set to F.
E1-11	Mid Output Frequency 2	Only applicable when E1-03 is set to F.
E1-12	Mid Output Frequency Voltage 2	Only applicable when E1-03 is set to F.
E1-13	Base Voltage	Only applicable when E1-03 is set to F.
E2: Motor Parameters Use E2 parameters to set motor-related data.		
E2-01	Motor Rated Current	Sets motor nameplate full load current in amperes (A).
E2-02	Motor Rated Slip	Sets the motor rated slip in hertz (Hz).
E2-03	Motor No-Load Current	Sets the magnetizing current of the motor as a percentage of the motor rated current (E2-01).
E2-04	Number of Motor Poles	Refer to V1000 Technical Manual for details.
E2-05	Motor Line-to-Line Resistance	Sets the phase-to-phase motor resistance in ohms.
E2-06	Motor Leakage Inductance	Sets the voltage drop due to motor leakage inductance as a percentage of motor rated voltage.
E2-07	Motor Iron-Core Saturation Coefficient 1	Refer to V1000 Technical Manual for details.

No.	Name	Description
E2-08	Motor Iron-Core Saturation Coefficient 2	Refer to V1000 Technical Manual for details.
E2-09	Motor Mechanical Loss	Refer to V1000 Technical Manual for details.
E2-10	Motor Iron Loss for Torque Compensation	Sets the motor iron loss in watts (W).
E2-11	Motor Rated Output	Sets the motor rated power in kilowatts (kW).
E2-12	Motor Iron-Core Saturation Coefficient 3	Refer to V1000 Technical Manual for details.
E3: Motor 2 V/f Characteristics Use E3 parameters to set the V/f pattern for a second motor.		
E3-01	Motor 2 Control Method	Refer to V1000 Technical Manual for details.
E3-04	Motor 2 Max Output Frequency	Refer to V1000 Technical Manual for details.
E3-05	Motor 2 Max Voltage	Refer to V1000 Technical Manual for details.
E3-06	Motor 2 Base Frequency	Refer to V1000 Technical Manual for details.
E3-07	Motor 2 Mid Output Freq.	Refer to V1000 Technical Manual for details.
E3-08	Motor 2 Mid Output Freq. Voltage	Refer to V1000 Technical Manual for details.
E3-09	Motor 2 Min. Output Freq.	Refer to V1000 Technical Manual for details.
E3-10	Motor 2 Min. Output Freq. Voltage	Refer to V1000 Technical Manual for details.
E3-11	Motor 2 Mid Output Frequency 2	Refer to V1000 Technical Manual for details.
E3-12	Motor 2 Mid Output Frequency Voltage 2	Refer to V1000 Technical Manual for details.
E3-13	Motor 2 Base Voltage	Refer to V1000 Technical Manual for details.
E4: Motor 2 Parameters Use E4 parameters to control a second motor operating on the same drive.		
E4-01	Motor 2 Rated Current	Refer to V1000 Technical Manual for details.
E4-02	Motor 2 Rated Slip	Refer to V1000 Technical Manual for details.
E4-03	Motor 2 Rated No-Load Current	Refer to V1000 Technical Manual for details.
E4-04	Motor 2 Motor Poles	Refer to V1000 Technical Manual for details.
E4-05	Motor 2 Line-to-Line Resistance	Refer to V1000 Technical Manual for details.
E4-06	Motor 2 Leakage Inductance	Refer to V1000 Technical Manual for details.
E4-07	Motor 2 Motor Iron-Core Saturation Coefficient 1	Refer to V1000 Technical Manual for details.
E4-08	Motor 2 Motor Iron-Core Saturation Coefficient 2	Refer to V1000 Technical Manual for details.
E4-09	Motor 2 Mechanical Loss	Refer to V1000 Technical Manual for details.
E4-10	Motor 2 Iron Loss	Refer to V1000 Technical Manual for details.
E4-11	Motor 2 Rated Capacity	Refer to V1000 Technical Manual for details.
E4-12	Motor 2 Iron-Core Saturation Coefficient 3	Refer to V1000 Technical Manual for details.
E4-14	Motor 2 Slip Compensation Gain	Refer to V1000 Technical Manual for details.
E4-15	Torque Compensation Gain - Motor 2	Refer to V1000 Technical Manual for details.
E5: PM Motor Parameters		
E5-01	Motor Code Selection (for PM motor)	Refer to V1000 Technical Manual for details.
E5-02	Motor Rated Capacity (for PM motor)	Refer to V1000 Technical Manual for details.
E5-03	Motor Rated Current	Refer to V1000 Technical Manual for details.
E5-04	Motor Poles	Refer to V1000 Technical Manual for details.

No.	Name	Description
E5-05	Motor Resistance	Refer to V1000 Technical Manual for details.
E5-06	Motor d Axis Inductance	Refer to V1000 Technical Manual for details.
E5-07	Motor q Axis Inductance	Refer to V1000 Technical Manual for details.
E5-09	Motor Induction Voltage Constant 1	Refer to V1000 Technical Manual for details.
E5-24	Motor Induction Voltage Constant 2	Refer to V1000 Technical Manual for details.
F1: Simple PG V/f Parameters Use F1 parameters to set up the drive for Simple PG V/f control. These parameters are enabled only when H6-01 = 03		
F1-02	Operation Selection at PG Open Circuit (PGO)	Refer to V1000 Technical Manual for details.
F1-03	Operation Selection at Overspeed (OS)	Refer to V1000 Technical Manual for details.
F1-04	Operation Selection at Deviation	Refer to V1000 Technical Manual for details.
F1-08	Overspeed Detection Level	Refer to V1000 Technical Manual for details.
F1-09	Overspeed Detection Delay Time	Refer to V1000 Technical Manual for details.
F1-10	Excessive Speed Deviation Detection Level	Refer to V1000 Technical Manual for details.
F1-11	Excessive Speed Deviation Detection Delay Time	Refer to V1000 Technical Manual for details.
F1-14	PG Open-Circuit Detection Time	Refer to V1000 Technical Manual for details.
F6 and F7: Serial Communications Option Card Settings Use F6 parameters to program the drive for serial communication.		
F6-01 to F6-62	Range reserved	Refer to V1000 Technical Manual for details.
F7-01 to F7-22	Range reserved	Refer to V1000 Technical Manual for details.

No.	Name	Description
H1: Multi-Function Digital Input H1 parameters to assign functions to the multi-function digital input terminals. Unused terminals should be set to “F”.		
H1-01	Multi-Function Digital Input Terminal S1 Function Selection	Selects function of terminal S1
H1-02	Multi-Function Digital Input Terminal S2 Function Selection	Selects function of terminal S2
H1-03	Multi-Function Digital Input Terminal S3 Function Selection	Selects function of terminal S3
H1-04	Multi-Function Digital Input Terminal S4 Function Selection	Selects function of terminal S4
H1-05	Multi-Function Digital Input Terminal S5 Function Selection	Selects function of terminal S5
H1-06	Multi-Function Digital Input Terminal S6 Function Selection	Selects function of terminal S6
H1-07	Multi-Function Digital Input Terminal S7 Function Selection	Selects function of terminal S7

H1 Multi-Function Digital Input Selections		
H1-□□ Setting	Function	Description
0	3-Wire Sequence	Closed: Reverse rotation (only for 3-wire sequence)
1	Local/Remote Selection	Open: Remote, Reference 1 or 2 (b1-01/02 or b1-15/16) Closed: Local, LED operator is run and reference source
2	External Reference 1/2	Open: Run and frequency reference source 1 (b1-01/02) Closed: Run and frequency reference source 2 (b1-01/02)

H1 Multi-Function Digital Input Selections		
H1-☐☐ Setting	**Function**	**Description**
3	Multi-Step Speed Reference 1	Used to select Multi-Step Speeds set in d1-01 to d1-16
4	Multi-Step Speed Reference 2	
5	Multi-Step Speed Reference 3	
6	Jog Reference Selection	Open: Selected speed reference Closed: Jog Frequency reference (d1-17). Jog has priority over all other reference sources.
7	Accel/Decel Time 1	Used to switch between Accel/Decel. Time 1/2
8	Baseblock Command (N.O.)	Open: Normal operation Closed: No drive output
9	Baseblock Command (N.C.)	Open: No drive output Closed: Normal operation
A	Accel/Decel Ramp Hold	Closed: The drive pauses during acceleration or deceleration and maintains the output frequency.
B	Drive Overheat Alarm (oH2)	Closed: Displays an oH2 alarm
C	Terminal A1/A2 Enable	Open: Terminal A2 disabled Closed: Terminal A2 enabled
F	Not used	Select this setting when not using the terminal or when using the terminal in a pass-through mode.
10	Up Command	Open: Maintains the current frequency reference Closed: Increases or decreases the current frequency reference
11	Down Command	
12	Forward Jog	Closed: Runs forward at the Jog Frequency d1-17.
13	Reverse Jog	Closed: Runs reverse at the Jog Frequency d1-17.
14	Fault Reset	Closed: Resets faults if cause is cleared and Run command removed.
15	Fast-Stop (N.O.)	Closed: Decelerates at the Fast-Stop time C1-09.
16	Motor 2 Selection	Open: Motor 1 (E1-☐☐, E2-☐☐) Closed: Motor 2 (E3-☐☐, E4-☐☐)
17	Fast-stop (N.C.)	Open: Decelerates according to C1-09 (Fast-stop Time)
18	Timer Input Function	Set the timer delay using parameters b4-01 and b4-02.
19	PID Disable	Closed: PID control disabled
1A	Accel/Decel Time Selection 2	Switches Accel/Decel times.
1B	Program Lockout	Open: Parameters can not be edited. (except U1-01 if reference source is set for operator) Closed: Parameters may be edited and saved.
1E	Reference Sample Hold	Closed: Samples the analog frequency reference and operates the drive at that speed.

H1 Multi-Function Digital Input Selections		
H1-☐☐ Setting	**Function**	**Description**
20 to 2F	External Fault	20: N.O., Always Detected, Ramp To Stop 21: N.C., Always Detected, Ramp To Stop 22: N.O., During Run, Ramp To Stop 23: N.C., During Run, Ramp To Stop 24: N.O., Always Detected, Coast To Stop 25: N.C., Always Detected, Coast To Stop 26: N.O., During Run, Coast To Stop 27: N.C., During Run, Coast To Stop 28: N.O., Always Detected, Fast-stop 29: N.C., Always Detected, Fast-stop 2A: N.O., During Run, Fast-stop 2B: N.C., During Run, Fast-stop 2C: N.O., Always Detected, Alarm Only (continue running) 2D: N.C., Always Detected, Alarm Only (continue running) 2E: N.O., During Run, Alarm Only (continue running) 2F: N.C., During Run, Alarm Only (continue running)
30	PID Integral Reset	Closed: Resets the PID control integral value.
31	PID Integral Hold	Closed: Maintains the current PID control integral value.
32	Multi-Step Speed Reference 4	Used to select Multi-Step Speeds set in d1-01 to d1-16
34	PID Soft Starter	Closed: Disables the PID soft starter b5-17.
35	PID Input Switch	Closed: Inverses the PID input signal
40	Forward Run Command (2-wire sequence)	Open: Stop Closed: Forward run
41	Reverse Run Command (2-wire sequence)	Open: Stop Closed: Reverse run
42	Run Command (2-wire sequence 2)	Open: Stop Closed: Run
43	FWD/REV Command (2-wire sequence 2)	Open: Reverse Closed: Forward
44	Offset Frequency 1 Addition	Closed: Adds d7-01 to the frequency reference.
45	Offset Frequency 2 Addition	Closed: Adds d7-02 to the frequency reference.
46	Offset Frequency 3 Addition	Closed: Adds d7-03 to the frequency reference.
60	DC Injection Braking Command	Closed: Triggers DC Injection Braking (b2-02)
61	External Search Command 1	Closed: Activates Current Detection Speed Search from the max. output frequency (E1-04) if b3-01=0.
62	External Search Command 2	Closed: Activates Current Detection Speed Search from the frequency reference if b3-01=0. Activates Speed Estimation Type Speed search if b3-01 =1.
65	KEB Ride-Thru 1 (N.C.)	Open: KEB Ride-Thru 1 enabled Closed: Normal operation
66	KEB Ride-Thru 1 (N.O.)	Open: Normal operation Closed: KEB Ride-Thru 1 enabled
67	Communications Test Mode	Tests the MEMOBUS/Modbus RS-485/422 interface.
68	High-Slip Braking	Closed: High-Slip braking is executed. Drive stops.
6A	Drive Enable	Open: Drive disabled. If this input is opened during run, then the drive will stop as specified by parameter b1-03. Closed: Ready for operation.

H1 Multi-Function Digital Input Selections		
H1-□□ Setting	**Function**	**Description**
75	Up 2 Command	Open: Maintains the current frequency reference Closed: Increases or decreases the frequency reference.
76	Down 2 Command	
7A	KEB Ride-Thru 2 (N.C.)	Open: KEB Ride-Thru 2 enabled Closed: Normal operation
7B	KEB Ride-Thru 2 (N.O.)	Open: Normal operation Closed: KEB Ride-Thru 2 enabled
7C	Short-Circuit Braking (N.O.)	Open: Normal operation Closed: Short-Circuit Braking
7D	Short-Circuit Braking (N.C.)	
7E	Forward/Reverse Detection	Direction of rotation detection (for Simple V/f w/PG)
90 to 96	DriveWorksEZ Digital Input 1 to 7	These settings are for digital input functions used in DriveWorksEZ. Normally there is no need to change or apply these settings.
9F	DriveWorksEZ enable	Open: DWEZ enabled Closed: DWEZ disabled

No.	Name	Description	Range
H2: Multi-Function Digital Outputs Use H2 parameters to assign functions to the multi-function digital outputs.			
H2-01	Terminal MA, MB and MC Function Selection (relay)	Refer to “Multi-Function Digital Output Selection Table” for a description of setting values.	0 to 192
H2-02	Terminal P1 Function Selection (open-collector)		
H2-03	Terminal P2 Function Selection (open-collector)		
H2-06	Watt Hour Output Unit Selection	Refer to V1000 Tech Manual.	0 to 4

H2 Multi-Function Digital Output Settings		
H2-□□ Setting	**Function**	**Description**
0	During Run	Closed: A Run command is active or voltage is output.
1	Zero Speed	Closed: Output frequency is 0.
2	Speed Agree 1	Closed: Output frequency equals the speed reference (plus or minus the hysteresis set to L4-02).
3	User Set Speed Agree 1	Closed: Output frequency and speed reference equal the value in L4-01 (plus or minus the hysteresis of L4-02).
4	Frequency Detection 1	Closed: Output frequency is less than or equal to the value in L4-01 with hysteresis determined by L4-02.
5	Frequency Detection 2	Closed: Output frequency is greater than or equal to the value in L4-01, with hysteresis determined by L4-02.
6	Drive Ready	Closed: Drive Ready. The drive is powered up, not in a fault state, and in the Drive mode.
7	DC Bus Undervoltage	Closed: DC bus voltage is below the UV trip level set in L2-05.
8	During Baseblock (N.O.)	Closed: This is no output voltage
9	Frequency Reference Source	Closed: Digital operator supplies the frequency reference.
A	Run Command Source	Open: Reference 1 or 2 are active Closed: Digital operator supplies the run command.
B	Torque Detection 1 (N.O.)	Closed: Output current/torque exceeds the torque value set in parameter L6-02 for longer than the time set in parameter L6-03.
C	Frequency Reference Loss	Closed: Loss of the analog frequency reference detected. Enabled when L4-05 = 1.

H2 Multi-Function Digital Output Settings		
H2-☐☐ Setting	**Function**	**Description**
D	Braking Resistor Fault	Closed: Braking resistor or transistor is overheated or faulted out.
E	Fault	Closed: Fault occurred (other than CPF00 and CPF01).
F	Not used/Through Mode	Set this value when the terminal is not used, or when using the terminal in the pass-through mode.
10	Alarm	Closed: An alarm is triggered.
11	Reset Command Active	Closed: Reset command to the drive is active.
12	Timer Output	Timer output, controlled by b4-01 and b4-02. Used in conjunction with the digital input (H1-☐☐ = 18 “timer function”).
13	Speed Agree 2	Closed: When drive output frequency equals the frequency reference +/- L4-04.
14	User Set Speed Agree 2	Closed: When the drive output frequency is equal to the value in L4-03 (plus or minus L4-04).
15	Frequency Detection 3	Closed: When the drive output frequency is less than or equal to the value in L4-03 with the hysteresis determined by L4-04.
16	Frequency Detection 4	Closed: When the output frequency is greater than or equal to the value in L4-03 with the hysteresis determined by L4-04.
17	Torque Detection 1 (N.C.)	Open: When the output current/torque exceeds the value set in parameter L6-02 for more time than is set in parameter L6-03.
18	Torque Detection 2 (N.O.)	Closed: When the output current/torque exceeds the value set in parameter L6-05 for more time than is set in parameter L6-06.
19	Torque Detection 2 (N.C.)	Open: Output current/torque exceeds the value set in parameter L6-05 for more time than is set in parameter L6-06.
1A	During Reverse Operation	Closed: Drive is running in the reverse direction.
1B	During Baseblock (N.C.)	Open: Drive is in base block condition. Output is disabled.
1C	Motor 2 Selection	Closed: Motor 2 is selected by a digital input (H1-☐☐ = 16)
1E	Restart Enabled	Closed: An automatic restart is performed
1F	Motor Overload Alarm (oL1)	Closed: OL1 is at 90% of its trip point or greater.
20	Drive Overheat Pre-alarm (oH)	Closed: Heatsink temperature exceeds the parameter L8-02 value.
22	Mechanical Weakening	Closed: Mechanical Weakening detected.
30	During Torque Limit	Closed: When the torque limit has been reached.
37	During Frequency Output	Closed: Frequency is output Open: Operation stopped, Baseblock, DC Injection Braking, or Initial Excitation is being performed.
38	Drive Enable	Closed: Multi-function input closes (H1-☐☐ = 6A)
39	Watt Hour Pulse Output	Output units are determined by H2-06, outputs 200 ms pulse for each incremented kWh count.
3C	LOCAL/REMOTE Status	Closed: LOCAL Open: REMOTE
3D	During Speed Search	Closed: Speed search is being executed.
3E	PID Feedback Low	Closed: PID Feedback Loss.
3F	PID Feedback High	Closed: PID Feedback Fault.
4A	During KEB Operation	Closed: KEB is being performed.
4B	During Short-Circuit Brake	Closed: Short-Circuit Braking is active.
4C	During Fast-stop	Closed: Fast-stop command is entered
4D	oH Pre-alarm Time Limit	Closed: oH Pre-alarm time limit is passed.

H2 Multi-Function Digital Output Settings		
H2-□□ Setting	**Function**	**Description**
90 to 92	DriveWorksEZ Digital Output 1 to 3	These settings are for digital output functions used in DriveWorksEZ. Normally there is no need to change or apply these settings.
100 to 192	H2 Parameter Functions Reversed Output Switching of 0 to 92	Reverse the output switching of the multi-function output functions. Set the last two digits of 1□□ to reverse the output signal of that specific function.

No.	Name	Description
	H3: Analog Inputs Use H3 parameters to set the multi-function analog input terminals.	
H3-01	Terminal A1 Signal Level Selection	0: 0 to +10 V (lower limit) 1: 0 to +10 V (no lower limit)
H3-02	Terminal A1 Function Selection	Sets the function of terminal A1.
H3-03	Terminal A1 Gain Setting	Sets the level of the input value selected in H3-02 when 10V is input at terminal A1.
H3-04	Terminal A1 Bias Setting	Sets the level of the input value selected in H3-02 when 0V is input at terminal A1.
H3-09	Terminal A2 Signal Level Selection	Sets the input signal level for terminal A2. 0: 0 to +10 V (with lower limit) 1: 0 to +10 V (no lower limit) 2: 4 to 20 mA 3: 0 to 20 mA
H3-10	Terminal A2 Function Selection	Sets the function of terminal A2.
H3-11	Terminal A2 Gain Setting	Sets the level of the input value selected in H3-10 when 10 V (20 mA) is input at terminal A2.
H3-12	Terminal A2 Input Bias	Sets the level of the input value selected in H3-10 when 0 V (0 or 4 mA) is input at terminal A2.
H3-13	Analog Input Filter Time Constant	Sets the primary delay filter time constant for terminals A1 and A2. Used for noise filtering.

H3 Multi-Function Analog Input Settings		
H3-□□ Setting	**Function**	**Maximum Input Level Possible**
0	Frequency Bias	Max output frequency (E1-04).
1	Frequency Gain	Frequency reference (voltage)
2	Auxiliary Frequency Reference (used as multi-step speed 2)	Max output frequency (E1-04)
4	Output Voltage Bias	Motor rated voltage (E1-05).
7	Overtorque/Undertorque Detection Level	Open Loop Vector: Motor rated torque V/f control: Drive rated current
B	PID Feedback	10V = 100%
C	PID Set Point	10V = 100%
E	Motor Temperature (PTC input)	10 V = 100.00%
F	Not used/Through Mode	–
10	FWD Torque Limit	Motor rated torque
11	REV Torque Limit	Motor rated torque
12	Regenerative Torque Limit	Motor rated torque
15	FWD/REV Torque Limit	Motor rated torque
16	Differential PID Feedback	10 V = 100%

H3 Multi-Function Analog Input Settings		
H3-□□ Setting	Function	Maximum Input Level Possible
30/31	DriveWorksEZ Analog Input 1/2	These settings are for analog output functions used in DriveWorksEZ. Normally there is no need to change or apply these settings.

No.	Name	Description
H4: Multi-Function Analog Outputs Use H4 parameters to configure the multi-function analog output terminals.		
H4-01	Multi-Function Analog Output Terminal AM)	Selects data output via multi-function analog output terminal AM.
H4-02	Multi-Function Analog Output Terminal AM Gain	Sets terminal AM output level when selected monitor is at 100%.
H4-03	Multi-Function Analog Output Terminal AM Gain	Refer to V1000 Technical Manual for details.
H5: MEMOBUS/Modbus Communications Use H5 Parameters to connect the drive to a MEMOBUS/Modbus network.		
H5-01	Drive Node Address	Selects drive station node number (address) for MEMOBUS/Modbus terminals R+, R-, S+, S-. Cycle power for the setting to take effect.
H5-02	Communication Speed Selection	0: 1200 bps 1: 2400 bps 2: 4800 bps 3: 9600 bps 4: 19200 bps 5: 38400 bps 6: 57600 bps 7: 76800 bps 8: 115200 bps
H5-03	Communication Parity Selection	0: No parity 1: Even parity 2: Odd parity
H5-04	Stopping Method After Communication Error	0: Ramp to stop 1: Coast to stop 2: Fast-stop 3: Alarm only
H5-05	Communication Fault Detection Selection	0: Disabled 1: Enabled - If communication is lost for more than two seconds, a CE fault will occur.
H5-06	Drive Transmit Wait Time	Set the wait time between receiving and sending data.
H5-07	RTS Control Selection	0: Disabled - RTS is always on. 1: Enabled - RTS turns on only when sending.
H5-09	CE Detection Time	Refer to V1000 Technical Manual for details.
H5-10	Unit Selection for MEMOBUS/ Modbus Register 0025H	Refer to V1000 Technical Manual for details.
H5-11	Communications ENTER Function Selection	Refer to V1000 Technical Manual for details.
H5-12	Run Command Method Selection	Refer to V1000 Technical Manual for details.

No.	Name	Description
H6: Pulse Train Input/Output Use H6 parameters to configure Pulse Train I/O operation.		
H6-01	Pulse Train Input Terminal RP Function Selection	0: Frequency reference 1: PID feedback value 2: PID setpoint value 3: Simple PG V/f control mode (can be set only when using motor 1 in the V/f control mode)
H6-02	Pulse Train Input Scaling	Sets the number of pulses (Hz) that is equal to 100% of the value selected in H6-01.
H6-03	Pulse Train Input Gain	Sets the level of the value selected in H6-01 when a frequency with the value set in H6-02 is input.
H6-04	Pulse Train Input Bias	Sets the level of the value selected in H6-01 when 0 Hz is input.
H6-05	Pulse Train Input Filter Time	Sets the pulse train input filter time constant.
H6-06	Pulse Train Monitor Terminal MP Selection	Select the pulse train monitor output function (value of the □-□□ part of U□-□□).
H6-07	Pulse Train Monitor Scaling	Sets the pulse output frequency in Hz when the monitor value is 100%.
L1: Motor Protection Functions Use L1 parameters to configure motor protective functions.		
L1-01	Motor Overload Protection Selection	0: Disabled 1: Standard Fan Cooled (< 10:1 motor) 2: Standard Blower Cooled (≥ 10:1 motor) 3: Vector Motor (100:1 motor) 4: PM motor with variable torque **NOTICE:** *The thermal protection is reset when the power is cycled. In applications where the power is frequently cycled, the drive may not be able to provide protection, even if this parameter is set to 1. Set to “0” and ensure each motor has a thermal relay installed.*
L1-02	Motor Overload Protection Time	Sets the motor thermal overload protection (OL1) time.
L1-03	Motor Overheat Alarm Operation Selection (PTC input)	Refer to V1000 Technical Manual for details.
L1-04	Motor Overheat Fault Operation Selection (PTC input)	Refer to V1000 Technical Manual for details.
L1-05	Motor Temperature Input Filter Time (PTC input)	Refer to V1000 Technical Manual for details.
L1-13	Continuous Electrothermal Operation Selection	Refer to V1000 Technical Manual for details.
L2: Momentary Power Loss Use L2 parameters to configure drive functions for momentary power loss conditions.		
L2-01	Momentary Power Loss Operation Selection	0: Disabled - Drive trips on (UV1) fault when power is lost. 1: Power Loss Ride-Thru Time - Drive will restart if power returns within the time set in L2-02. 2: CPU Power Active - Drive will restart if power returns as long as the CPU is working.
L2-02	Momentary Power Loss Ride-Thru Time	Refer to V1000 Technical Manual for details.
L2-03	Momentary Power Loss Minimum Baseblock Time	Refer to V1000 Technical Manual for details.
L2-04	Momentary Power Loss Voltage Recovery Ramp Time	Refer to V1000 Technical Manual for details.
L2-05	Undervoltage Detection Level (UV)	Refer to V1000 Technical Manual for details.
L2-06	KEB Deceleration Time	Refer to V1000 Technical Manual for details.

No.	Name	Description
L2-07	KEB Acceleration Time	Refer to V1000 Technical Manual for details.
L2-08	KEB Start Output Frequency Reduction	Refer to V1000 Technical Manual for details.
L2-11	Desired DC Bus Voltage during KEB	Refer to V1000 Technical Manual for details.
L3: Stall Prevention Function Use L3 parameters to configure the stall prevention function.		
L3-01	Stall Prevention Selection during Acceleration	Refer to V1000 Technical Manual for details.
L3-02	Stall Prevention Level during Acceleration	Used when L3-01 = 1 or 2. 100% is equal to the drive rated current. Decrease the set value if stalling or excessive current occurs with default setting.
L3-03	Stall Prevention Limit during Acceleration	Refer to V1000 Technical Manual for details.
L3-04	Stall Prevention Selection during Deceleration	0: Disabled 1: General Purpose 2: Intelligent 3: Stall Prevention with Braking Resistor 4: Overexcitation Deceleration
L3-05	Stall Prevention Selection during Run	0: Disabled 1: Decel Time 1 2: Decel Time 2
L3-06	Stall Prevention Level during Run	Enabled when L3-05 is set to “1” or “2”. 100% is equal to the drive rated current.
L3-11	OV Suppression Function Selection	Refer to V1000 Technical Manual for details.
L3-17	Overvoltage Suppression and Stall Prevention Desired DC Bus Voltage	Refer to V1000 Technical Manual for details.
L3-20	Main Power Circuit Voltage Adjustment Gain	Refer to V1000 Technical Manual for details.
L3-21	Accel/Decel Rate Calculation Gain	Refer to V1000 Technical Manual for details.
L3-22	Deceleration Time at Stall Prevention during Acceleration	Refer to V1000 Technical Manual for details.
L3-23	Automatic Reduction Selection for Stall Prevention during Run	0: Sets the stall prevention level throughout the entire frequency range to the value in parameter L3-06. 1: Automatically lowers the stall prevention level in the constant output range. The lower limit value is 40% of L3-06.
L3-24	Motor Acceleration Time for Inertia Calculations	Refer to V1000 Technical Manual for details.
L3-25	Load Inertia Ratio	Refer to V1000 Technical Manual for details.
L4: Frequency Detection Use L4 parameters to configure frequency detection operation.		
L4-01	Speed Agreement Detection Level	These parameters configure the multi-function output (H2-□□ = 2, 3, 4, 5) settings “Fref/Fout Agree 1,” “Fref/Set Agree 1,” “Frequency Detection 1,” and “Frequency detection 2.”
L4-02	Speed Agreement Detection Width	
L4-03	Speed Agreement Detection Level (+/-)	Refer to V1000 Technical Manual for details.
L4-04	Speed Agreement Detection Width (+/-)	
L4-05	Frequency Reference Loss Detection Selection	0: Stop - Drive will stop 1: Run at L4-06

No.	Name	Description
L4-06	Frequency Reference at Reference Loss	Refer to V1000 Technical Manual for details.
L4-07	Frequency Detection Conditions	Refer to V1000 Technical Manual for details.
L5: Fault Reset Use L5 parameters to configure Automatic Restart after fault.		
L5-01	Number of Auto Restart Attempts	Sets the counter for the number of times the drive attempts to restart when the following faults occur: GF, LF, OC, OV, PF, PUF, RH, RR, OL1, OL2, OL3, OL4, UV1.
L5-02	Auto Restart Operation Selection	Refer to V1000 Technical Manual for details.
L5-04	Fault Reset Interval Time	Refer to V1000 Technical Manual for details.
L5-05	Fault Reset Operation Selection	Refer to V1000 Technical Manual for details.
L6: Overtorque Detection Use L6 parameters to configure overtorque detection.		
L6-01	Torque Detection Selection 1	0: Disabled 1: OL3 at Speed Agree - Alarm 2: OL3 at RUN - Alarm 3: OL3 at Speed Agree - Fault 5: UL3 at Speed Agree - Alarm 6: UL3 at RUN - Alarm 7: UL3 at Speed Agree - Fault 8: UL3 at RUN - Fault
L6-02	Torque Detection Level 1	Sets the overtorque/undertorque detection level.
L6-03	Torque Detection Time 1	Sets the length of time an overtorque/undertorque condition must exist before Torque Detection 1 is triggered.
L6-04	Torque Detection Selection 2	Refer to V1000 Technical Manual for details.
L6-05	Torque Detection Level 2	Refer to V1000 Technical Manual for details.
L6-06	Torque Detection Time 2	Refer to V1000 Technical Manual for details.
L6-08	Mechanical Weakening (OL5) Detection Operation	Refer to V1000 Technical Manual for details.
L6-09	Mechanical Weakening Detection Speed Level	Refer to V1000 Technical Manual for details.
L6-10	Mechanical Weakening Detection Time	Refer to V1000 Technical Manual for details.
L6-11	Mechanical Weakening Detection Start Time	Refer to V1000 Technical Manual for details.
L7: Torque Limit Use L7 parameters to configure the torque limit function.		
L7-01	Forward Torque Limit	Refer to V1000 Technical Manual for details.
L7-02	Reverse Torque Limit	
L7-03	Forward Regenerative Torque Limit	
L7-04	Reverse Regenerative Torque Limit	
L7-06	Torque Limit Integral Time Constant	Refer to V1000 Technical Manual for details.
L7-07	Torque Limit Control Method Selection during Accel/Decel	Refer to V1000 Technical Manual for details.
L8: Hardware Protection Use L8 parameters to configure hardware protection functions.		
L8-01	Internal Dynamic Braking Resistor Protection Selection (ERF type)	0: Resistor overheat protection disabled 1: Resistor overheat protection enabled

No.	Name	Description
L8-02	Overheat Alarm Level	Refer to V1000 Technical Manual for details.
L8-03	Overheat Pre-Alarm Operation Selection	Refer to V1000 Technical Manual for details.
L8-05	Input Phase Loss Protection Selection	0: Disabled 1: Enabled
L8-07	Output Phase Loss Protection	0: Disabled 1: Enabled (triggered by a single phase loss). 2: Enabled (triggered when two phases are lost).
L8-09	Output Ground Fault Detection Selection	Refer to V1000 Technical Manual for details.
L8-10	Heatsink Cooling Fan Operation Selection	0: Fan On-Run Mode 1: Fan always on
L8-11	Heatsink Cooling Fan Operation Delay Time	Refer to V1000 Technical Manual for details.
L8-12	Ambient Temperature Setting	Refer to V1000 Technical Manual for details.
L8-15	OL2 Characteristics Selection at Low Speeds	Refer to V1000 Technical Manual for details.
L8-18	Soft CLA Selection	Refer to V1000 Technical Manual for details.
L8-19	Frequency Reduction Rate during OH Pre-Alarm	Refer to V1000 Technical Manual for details.
L8-29	Current Unbalance Detection (LF2)	Refer to V1000 Technical Manual for details.
L8-35	Installation Method Selection	Refer to V1000 Technical Manual for details.
L8-38	Carrier Frequency Reduction	0: Disabled 1: Enabled below 6Hz 2: Enabled for the whole speed range
L8-40	Carrier Frequency Reduction Time	Refer to V1000 Technical Manual for details.
L8-41	High Current Alarm Selection	Refer to V1000 Technical Manual for details.
n1: Hunting Prevention Use n1 parameters to configure hunting prevention operation.		
n1-01	Hunting Prevention Selection	Refer to V1000 Technical Manual for details.
n1-02	Hunting Prevention Gain Setting	Refer to V1000 Technical Manual for details.
n1-03	Hunting Prevention Time Constant	Refer to V1000 Technical Manual for details.
n1-05	Hunting Prevention Gain while in Reverse	Refer to V1000 Technical Manual for details.
n2: Speed Feedback Detection Control Function Use n2 parameters to configure the Speed Feedback Detection Control function operation.		
n2-01	Speed Feedback Detection Control (AFR) Gain	Refer to V1000 Technical Manual for details.
n2-02	Speed Feedback Detection Control (AFR) Time Constant	Refer to V1000 Technical Manual for details.
n2-03	Speed Feedback Detection Control (AFR) Time Constant 2	Refer to V1000 Technical Manual for details.
n3: High-Slip Braking Use n3 parameters to configure the high-slip braking function.		
n3-01	High-Slip Braking Deceleration Frequency Width	Refer to V1000 Technical Manual for details.
n3-02	High-Slip Braking Current Limit	Refer to V1000 Technical Manual for details.
n3-03	High-Slip Braking Dwell Time at Stop	Refer to V1000 Technical Manual for details.

No.	Name	Description
n3-04	High-Slip Braking Overload Time	Refer to V1000 Technical Manual for details.
n3-13	Overexcitation Deceleration Gain	Refer to V1000 Technical Manual for details.
n3-21	High-Slip Suppression Current Level	Refer to V1000 Technical Manual for details.
n3-23	Overexcitation Operation Selection	Refer to V1000 Technical Manual for details.
n6: Online Tuning of Resistance between Motor Lines Use n6 parameters to adjust the motor line-to-line resistance while the drive is online.		
n6-01	Line-to-Line Motor Resistance Online Tuning	Refer to V1000 Technical Manual for details.
n8: Permanent Magnet (PM) Motor Control Use n8 parameters to control the PM motor control.		
n8-45	Speed Feedback Detection Control Gain	Refer to V1000 Technical Manual for details.
n8-47	Pull-In Current Compensation Time Constant	Refer to V1000 Technical Manual for details.
n8-48	Pull-In Current	Refer to V1000 Technical Manual for details.
n8-49	Load Current	Refer to V1000 Technical Manual for details.
n8-51	Acceleration Pull-In Current	Refer to V1000 Technical Manual for details.
n8-54	Voltage Error Compensation Time Constant	Refer to V1000 Technical Manual for details.
n8-55	Load Inertia	Refer to V1000 Technical Manual for details.
n8-62	Output Voltage Limit	Refer to V1000 Technical Manual for details.
n8-65	Speed Feedback Detection Control Gain during ov Suppression	Refer to V1000 Technical Manual for details.
o1: Display Settings Use o1 parameters to configure the digital operator display.		
o1-01	Drive Mode Unit Monitor Selection	Refer to V1000 Technical Manual for details.
o1-02	User Monitor Selection After Power Up	Refer to V1000 Technical Manual for details.
o1-03	Digital Operator Display Selection	0: Hz 1: % (100% = E1-04) 2: r/min (enter the number of motor poles into E2-04/E4-04/E5-04) 3: User defined by parameters o1-10 and o1-11
o1-10	Frequency Reference Setting and User-Set Display	Refer to V1000 Technical Manual for details.
o1-11	Frequency Reference Setting / Decimal Display	
o2: Multi-Function Selections Use o2 parameters to configure LED digital operator key functions.		
o2-01	LO/RE Key Function Selection	Refer to V1000 Technical Manual for details.
o2-02	STOP Key Function Selection	Enables/Disables the operator panel STOP key when the drive is operated form external sources (not operator). 0: Disabled. 1: Enabled
o2-03	User Parameter Default Value	Refer to V1000 Technical Manual for details.
o2-04	Drive Model Selection	Refer to V1000 Technical Manual for details.
o2-05	Frequency Reference Setting Method Selection	0: Data/Enter key must be pressed to enter a frequency reference. 1: Data/Enter key is not required. The frequency reference is adjusted by the “up” and “down” arrow keys.

No.	Name	Description
o2-06	Operation Selection when Digital Operator is Disconnected	0: The drive will continue operation 1: The drive will trigger a fault (OPR) and the motor will coast to stop
o2-07	Motor Direction at Power Up when Using Operator	Refer to V1000 Technical Manual for details.
o4: Maintenance Period Use o4 parameters to perform maintenance.		
o4-01	Accumulated Operation Time Setting	Sets the starting value for the cumulative operation time of the drive in units of 10h.
o4-02	Accumulated Operation Time Selection	0: Logs power-on time 1: Logs operation time when the drive output is active (output operation time).
o4-03	Cooling Fan Operation Time Setting	Refer to V1000 Technical Manual for details.
o4-05	Capacitor Maintenance Setting	Refer to V1000 Technical Manual for details.
o4-07	Soft Charge Bypass Relay Maintenance Setting	Refer to V1000 Technical Manual for details.
o4-09	IGBT Maintenance Setting	Refer to V1000 Technical Manual for details.
o4-11	U2, U3 Initialize Selection	0: Saves the fault monitor data 1: Resets the fault monitor data
o4-12	kWh Monitor Initialize Selection	Refer to V1000 Technical Manual for details.
o4-13	Number of Run commands Initialize selection	Refer to V1000 Technical Manual for details.
T1-00	Motor Selection 1/2	1: 1st Motor - E1 to E2 2: 2nd Motor - E3 to E4 (this selection is not displayed if motor 2 has not been selected)
T1-01	Auto-Tuning Mode Selection	0: Rotational Auto-Tuning 2: Stationary Auto-Tuning 3: Rotational Auto-Tuning for V/f control
T1-02	Motor Rated Power	Sets the motor rated power in kilowatts (kW).
T1-03	Motor Rated Voltage	Sets the motor rated voltage in volts (V).
T1-04	Motor Rated Current	Sets the motor rated current in amperes (A).
T1-05	Motor Base Frequency	Sets the base frequency of the motor in Hertz (Hz).
T1-06	Number of Motor Poles	Sets the number of motor poles.
T1-07	Motor Base Speed	Sets the base speed of the motor in revolutions per minute r/min (RPM).
T1-11	Motor Iron Loss	Provides the iron loss for determining the Energy Saving coefficient.
U1: Operation Status Monitors Use U1 monitors to display the operation status of the drive.		
U1-01	Frequency Reference	Monitors the frequency
U1-02	Output Frequency	Displays the output frequency.
U1-03	Output Current	Displays the output current.
U1-04	Control Mode	Refer to V1000 Technical Manual for details.
U1-05	Motor Speed	Displays the motor speed feedback. Display units are determined by o1-03.
U1-06	Output Voltage Reference	Displays the output voltage.
U1-07	DC Bus Voltage	Displays the DC bus voltage.
U1-08	Output Power	Displays the output voltage (this value is determined internally).
U1-09	Torque Reference	Monitor of internal torque reference value for Open Loop Vector (OLV) control

No.	Name	Description
U1-10	Input Terminal Status	Displays the input terminal status.
U1-11	Output Terminal Status	Displays the output terminal status.
U1-12	Drive Status	Verifies the drive operation status.
U1-13	Terminal A1 Input Voltage	Displays the analog input A1 input level. 100% when the input is 10 V.
U1-14	Terminal A2 Input Voltage	Displays the analog input A2 input level. 100% when the input is 10 V / 20 mA.
U1-16	Output Frequency after Soft Start	Displays the output frequency.
U1-18	OPE Fault Parameter	Displays the parameter number for oPE□□ or Err (operator error) where the error occurred.
U1-19	MEMOBUS/Modbus Error Code	Refer to V1000 Technical Manual for details.
U1-24	Input Pulse Monitor	Displays the Pulse Train input RP frequency.
U1-25	Software No. (Flash)	Yaskawa Flash ID
U1-26	Software No. (ROM)	Yaskawa ROM ID
U2: Fault Trace Use U2 monitor parameters to view fault trace data.		
U2-01	Current Fault	Display of the current fault.
U2-02	Previous Fault	Display of the previous fault.
U2-03	Frequency Reference at Previous Fault	Displays the frequency reference at the previous fault.
U2-04	Output Frequency at Previous Fault	Displays the output frequency at the previous fault.
U2-05	Output Current at Previous Fault	Displays the output current at the previous fault.
U2-06	Motor Speed at Previous Fault	Displays the motor speed at the previous fault.
U2-07	Output Voltage at Previous Fault	Displays the output voltage at the previous fault.
U2-08	DC Bus Voltage at Previous Fault	Displays the DC bus voltage at the previous fault.
U2-09	Output Power at Previous Fault	Displays the output power at the previous fault.
U2-10	Torque Reference at Previous Fault	Displays the torque reference at the previous fault.
U2-11	Input Terminal Status at Previous Fault	Displays the input terminal status at the previous fault. Displayed as in U1-10.
U2-12	Output Terminal Status at Previous Fault	Displays the output status at the previous fault.
U2-13	Drive Operation Status at Previous Fault	Displays the operation status of drive at the previous fault.
U2-14	Cumulative Operation Time at Previous Fault	Displays the cumulative operation time at the previous fault.
U2-15	Soft Starter Speed Reference at Previous Fault	Displays speed reference for soft starter at the previous fault.
U2-16	Motor q-Axis Current at Previous Fault	Displays q-axis current for the motor at the previous fault.
U2-17	Motor d-Axis Current at Previous Fault	Displays d-axis current for the motor at the previous fault.
U3: Fault History Use U3 parameters to display fault data.		
U3-01	Most Recent Fault	Displays the most recent fault.
U3-02	2nd Most Recent Fault	Displays the second most recent fault.
U3-03	3rd Most Recent Fault	Displays the third most recent fault.
U3-04	4th Most Recent Fault	Displays the fourth most recent fault.

No.	Name	Description
U3-05	5th Most Recent Fault	Displays the fifth most recent fault.
U3-06	6th Most Recent Fault	Displays the sixth most recent fault.
U3-07	7th Most Recent Fault	Displays the seventh most recent fault.
U3-08	8th Most Recent Fault	Displays the eighth most recent fault.
U3-09	9th Most Recent Fault	Displays the ninth most recent fault.
U3-10	10th Most Recent Fault	Displays the tenth most recent fault.
U3-11	Cumulative Operation Time at Most Recent Fault	Displays the cumulative operation time at the most recent fault.
U3-12	Cumulative Operation Time at 2nd Most Recent Fault	Displays the cumulative operation time at the second most recent fault.
U3-13	Cumulative Operation Time at 3rd Most Recent Fault	Displays the cumulative operation time at the third most recent fault.
U3-14	Cumulative Operation Time at 4th Most Recent Fault	Displays the cumulative operation time at the fourth most recent fault.
U3-15	Cumulative Operation Time at 5th Most Recent Fault	Displays the cumulative operation time at the fifth most recent fault.
U3-16	Cumulative Operation Time at 6th Most Recent Fault	Displays the cumulative operation time at the sixth most recent fault.
U3-17	Cumulative Operation Time at 7th Most Recent Fault	Displays the cumulative operation time at the seventh most recent fault.
U3-18	Cumulative Operation Time at 8th Most Recent Fault	Displays the cumulative operation time at the eighth most recent fault.
U3-19	Cumulative Operation Time at 9th Most Recent Fault	Displays the cumulative operation time at the ninth most recent fault.
U3-20	Cumulative Operation Time at 10th Most Recent Fault	Displays the cumulative operation time at the tenth most recent fault.
U4: Maintenance Monitors Use U4 parameters to display drive maintenance information.		
U4-01	Accumulated Operation Time	Refer to V1000 Technical Manual for details.
U4-02	Number of Run Commands	Refer to V1000 Technical Manual for details.
U4-03	Cooling Fan Operation Time	Refer to V1000 Technical Manual for details.
U4-05	Capacitor Maintenance	Refer to V1000 Technical Manual for details.
U4-06	Soft Charge Bypass Relay Maintenance	Refer to V1000 Technical Manual for details.
U4-07	IGBT Maintenance	Refer to V1000 Technical Manual for details.
U4-08 *<1>*	Heatsink Temperature	Refer to V1000 Technical Manual for details.
U4-09	LED Check	Refer to V1000 Technical Manual for details.
U4-10	kWH, Lower 4 Digits	Monitors the drive output power.
U4-11	kWH, Upper 5 Digits	
U4-13	Peak Hold Current	Displays the peak hold current during run.
U4-14	Peak Hold Output Frequency	Refer to V1000 Technical Manual for details.
U4-16	Motor Overload Estimate (OL1)	100% = OL1 detection level
U4-18	Frequency Reference Source Selection	Refer to V1000 Technical Manual for details.
U4-19	Frequency Reference from MEMOBUS/Modbus Comm.	Refer to V1000 Technical Manual for details.
U4-20	Option Frequency Reference	Refer to V1000 Technical Manual for details.

No.	Name	Description
U4-21	Run Command Source Selection	Refer to V1000 Technical Manual for details.
U4-22	MEMOBUS/Modbus Communications Reference	Refer to V1000 Technical Manual for details.
U4-23	Option Card Reference	Refer to V1000 Technical Manual for details.
U5: PID Monitor Use U5 parameters to view application-specific settings.		
U5-01	PID Feedback	Displays the PID feedback value in.
U5-02	PID Input	Refer to V1000 Technical Manual for details.
U5-03	PID Output	Displays PID control output.
U5-04	PID Setpoint	Displays the PID setpoint.
U5-05	PID differential feedback	Refer to V1000 Technical Manual for details.
U5-06	PID Adjusted Feedback	Refer to V1000 Technical Manual for details.
U6: Control Monitor Use U6 parameters to display drive control information.		
U6-01	Motor Secondary Current (Iq)	Refer to V1000 Technical Manual for details.
U6-02	Motor Excitation Current (ld)	Refer to V1000 Technical Manual for details.
U6-03	ASR Input	Refer to V1000 Technical Manual for details.
U6-04	ASR Output	Refer to V1000 Technical Manual for details.
U6-05	Output voltage reference (Vq)	Output voltage reference (Vq). (q-axis)
U6-06	Output Voltage Reference (Vd)	Output voltage reference (Vd). (d-axis)
U6-07	q-axis ACR Output	Refer to V1000 Technical Manual for details.
U6-08	d-Axis ACR Output	Refer to V1000 Technical Manual for details.
U6-20	Frequency Reference Bias (Up/Down 2)	Refer to V1000 Technical Manual for details.
U6-21	Offset Frequency	Refer to V1000 Technical Manual for details.

<1> Available for the drive software version 1011 or later.

Note: Cycle power to the drive to enable MEMOBUS/Modbus settings.